

# **DISTRIBUTED GENERATION INTERCONNECTION TIMELINESS STUDY: CALIFORNIA INVESTOR- OWNED UTILITIES, 2004 TO 2007**

*Prepared For:*

**California Energy  
Commission**  
Public Interest Energy  
Research Program

*Prepared By:*

Edan Prabhu, Reflective  
Energies



Arnold Schwarzenegger  
*Governor*

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***Prepared By:***

Edan Prabhu  
Reflective Energies  
Mission Viejo, California  
Commission Contract No. 500-03-012  
Commission Work Authorization No: 2.0

***Prepared For:***

Public Interest Energy Research (PIER)  
**California Energy Commission**

Steve Ghadiri

***Contract Manager***

Pedro Gomez

***Program Area Lead***

***Energy Systems Integration***

Mike Gravely

***Office Manager***

***Energy Systems Research Office***



Laurie ten Hope

***Deputy Director***

***ENERGY RESEARCH AND DEVELOPMENT DIVISION***

Melissa Jones

***Executive Director***

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## Preface

The California Energy Commission's Public Interest Energy Research (PIER) Program supports public interest energy research and development that will help improve the quality of life in California by bringing environmentally safe, affordable, and reliable energy services and products to the marketplace.

The PIER Program conducts public interest research, development, and demonstration (RD&D) projects to benefit California.

The PIER Program strives to conduct the most promising public interest energy research by partnering with RD&D entities, including individuals, businesses, utilities, and public or private research institutions.

PIER funding efforts are focused on the following RD&D program areas:

- Buildings End-Use Energy Efficiency
- Energy Innovations Small Grants
- Energy-Related Environmental Research
- Energy Systems Integration
- Environmentally Preferred Advanced Generation
- Industrial/Agricultural/Water End-Use Energy Efficiency
- Renewable Energy Technologies
- Transportation

The *DG Interconnection Timeliness Study: California IOUs, 2004 to 2007* is the final report for Task 2.0 of the Focus III Forging a Consensus on Utility System Interconnection project (Contract Number 500-03-012) conducted by Reflective Energies. The information from this project contributes to PIER's Energy Systems Integration Research Program.

For more information about the PIER Program, please visit the Energy Commission's website at [www.energy.ca.gov/pier](http://www.energy.ca.gov/pier) or contact the Energy Commission at 916-654-4878.



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## Abstract

California is one of the first states to have adopted a standard practice for the interconnection of distributed energy resources (DER) devices such as small wind turbines and solar panel systems to the electric grid. In October 1999, the [California Public Utilities Commission \(CPUC\)](#) issued an order instituting a new distributed energy resources rulemaking (99-10-025) to address interconnection standards. This rulemaking progressed into the rewriting of Rule 21, part of each investor-owned utility's tariff, by a working committee including representatives from the California Energy Commission and the state's electric utilities. The objective of this ruling was to arrive at a clearer and simplified utility process for the interconnection of small-distributed energy resources customers to the grid. The new version of Rule 21 specified standard interconnection, operating, and metering requirements for distributed energy resources generators. The rulemaking initiated by the Energy Commission and the CPUC progressed into the rewriting of Rule 21 by a working committee, including representatives from both parties and from the state's electric utilities. Consequently, the new version of Rule 21 specifies standard interconnection, operating, and metering requirements for distributed energy resources generators.

Energy Commission used a technical support contract known as FOCUS (Forging a Consensus on Utility System) Interconnection to create fair and uniform interconnection standards. The FOCUS III Project was a continuation of the FOCUS I and FOCUS II Projects, with the goal of improving Rule 21, the California investor-owned utilities' rule governing interconnection of distributed generation to the electricity system. FOCUS II included a study on the effect of the revised Rule 21 on interconnections from 2000 through 2003. This report covers the interconnections to California investor-owned utilities from 2004 through 2007.

Benefits from using distributed generation include: improved reliability and power quality for customers using distributed generation and customers close to distributed generation sites, customer ability to reduce system peak load, and efficiency gains from avoiding line losses. For utilities, distributed generation can defer the need for new transmission and distribution infrastructure, reduce utility resource acquisition costs, and support ancillary services. The reduction in utilities costs will translate in direct lower rates for its ratepayers, as well.

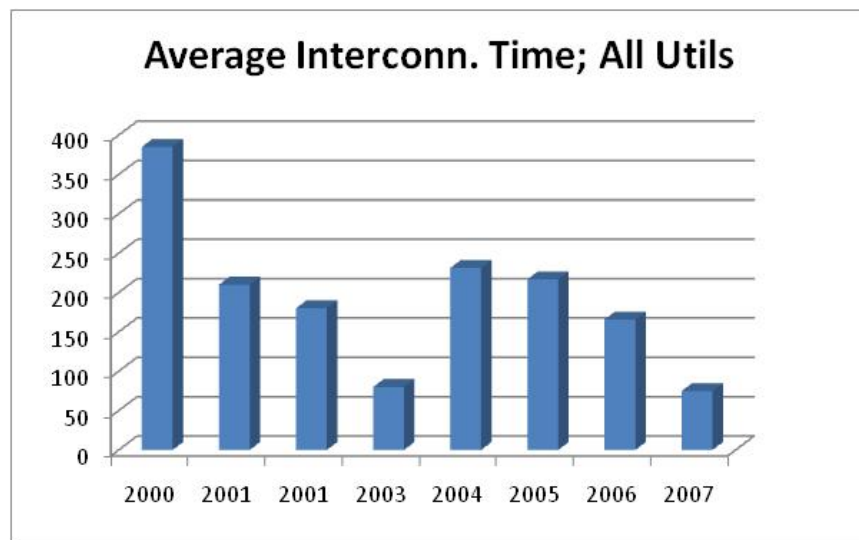
**Keywords:** Distributed generation, interconnection, IOU, investor owned utility, Rule 21, distributed energy resources, renewable energy, interconnection of generation, renewables portfolio standard, photovoltaic energy, integrating intermittent renewables



## Executive Summary

This study is a follow-up to an earlier study titled *Making Better Connections, Cost Effectiveness Report on Interconnection of Distributed Generation in California Under the Revised Rule 21*. The earlier study covered interconnections between 2000 and 2003. This study covers 2004 through 2007. While the previous study did not include net energy metering projects because they were not interconnected under Rule 21, the current study does include net energy metering projects over 30 kilowatts (kW) because they are interconnected in a manner similar to Rule 21. (Interconnection defined by the Energy Commission's website: "The linkage of transmission lines between two utilities, enabling power to be moved in either direction. Interconnections allow the utilities to help contain costs while enhancing system reliability.")

The average interconnection time for all utilities followed a similar pattern for all California investor-owned utilities. From 2000 through 2003, the average interconnection time dropped significantly, from almost 400 days to about 80 days. In 2004, the average interconnection time shot up to over 200 days but has steadily declined since then, averaging only 75 days in 2007. While the reason for the anomaly in 2004 is not clear, the overall trend is consistently downward. The more reduction in interconnection time of wide variety distributed energy resources, the more competitive generation will be included in the compound and therefore, ratepayers will see longer lasting lower cost benefits.



**Figure 1. Average interconnection time.**

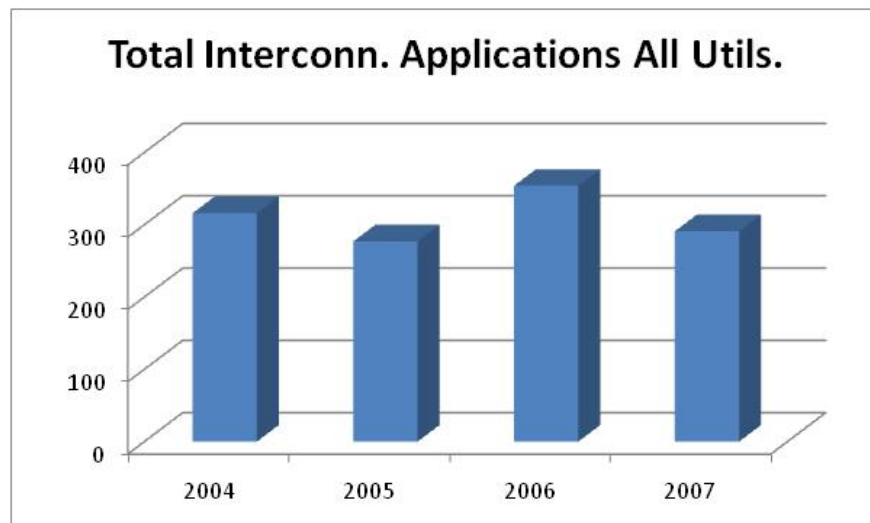
Source: Provided by the author

The number of interconnection applications through the period for all utilities combined stayed steady, around 300 a year. However, the total number of kW declined sharply each year. Some of this decline was probably offset by increases in small net energy metering<sup>1</sup> and self-

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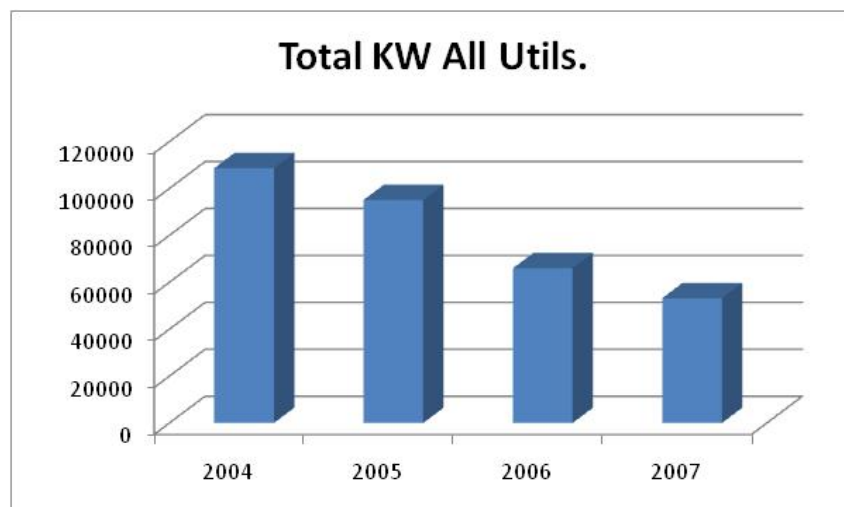
1. Customers who install small solar, wind, biogas, and fuel cell generation facilities (1 MW or less) to serve all or a portion of onsite electricity needs are eligible for the state's net metering program. NEM allows customer-generators to receive a financial credit for power generated by customer-generators onsite system and fed back to the utility. The credit is used to offset the customer's electricity bill. NEM is

generation photovoltaic (PV) interconnections that were not included in this study. Net energy meter means that any kilowatt-hours a customer's renewable energy generator feeds to the grid will be subtracted from kilowatt-hours of electricity the customer obtains from the utility to determine the net amount of kilowatt-hours the customer receives from the utility. The customer is billed only for those kilowatt-hours.



**Figure 2. Total interconnection applications by all utilities**

Source: Provided by the author



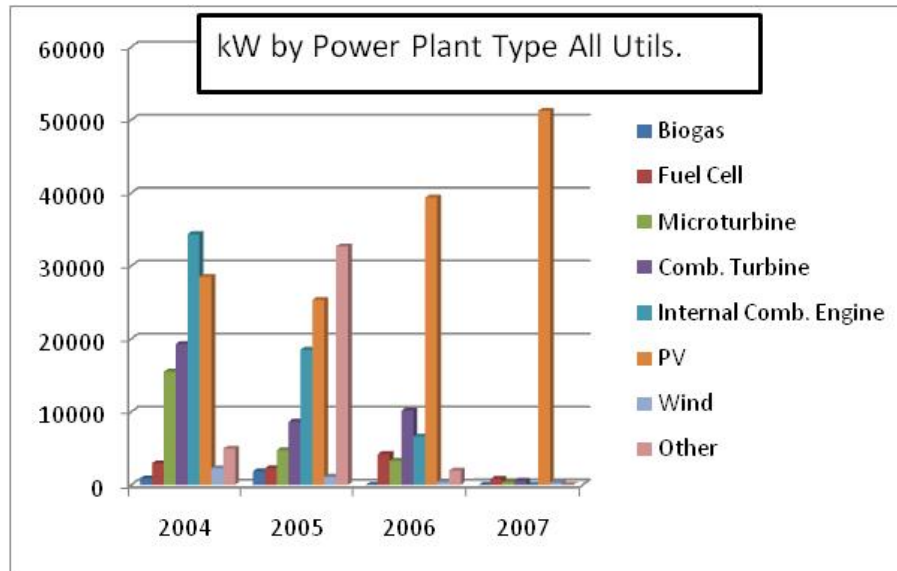
**Figure 3. Total kilowatt capacity interconnection by all utilities**

Source: Provided by the author

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an important element of the policy framework supporting direct customer investment in grid-tied distributed renewable energy generation, including customer-sited solar PV systems.

The types of power plants being installed also underwent significant changes between 2003 and 2007. Internal combustion engines, microturbines, fuel cells, and wind declined sharply over the period, and by 2007, other than PV that increased sharply, virtually no other power plants were being installed in California.



**Figure 4. Kilowatts by power plant type, all utilities**

Source: Provided by the author

Requests for certification of new interconnection systems also declined over the last few years, and today the only pending request for certification is a request by FuelCell Energy Inc., headquarters are based in Danbury, CT.

Distributed generation in California declined severely between 2003 and 2007, except for PV systems that increased dramatically in 2006 and 2007. California investor-owned utilities were invited to provide comments that are included as appendices.

### **Benefits to California**

The author asserts that the average time for interconnection of distributed energy resources (DER) for all utilities has reduced considerably. By simplifying the interconnection rule for various small generations to the grid, the State will benefit from the proliferation of renewables as stated in the Governor's previous Executive Order S-14-20.

California has a wealth of both renewable and non-renewable distributed generation technologies. These technologies have tremendous potential to help meet California's growing energy needs as both additional generation sources and essential elements of customer choice. These technologies are also strategic components of the loading order.



## 1.0 Project Outcomes

The timeliness of Rule 21 and large photovoltaic (PV) interconnections has improved steadily from 2000 through 2003, and again from 2004 through 2007. The total number of interconnection applications remained steady, but the mix of types of power plants shifted dramatically, from microturbines and biogas plants to PV systems.

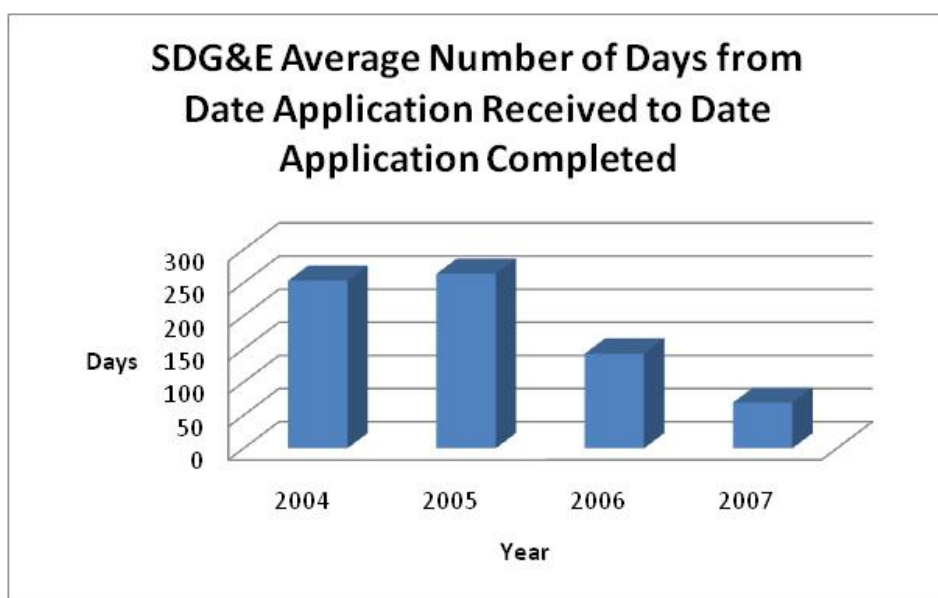
### 1.1. Interconnection Timeliness Details, 2004 Through 2007

Each of the investor-owned utilities (IOU) submitted its own data for the report, and each IOUs data is examined separately below, after which the combined progress of all utilities is examined.

### 1.2. Interconnection Timeliness Between 2004 and 2007

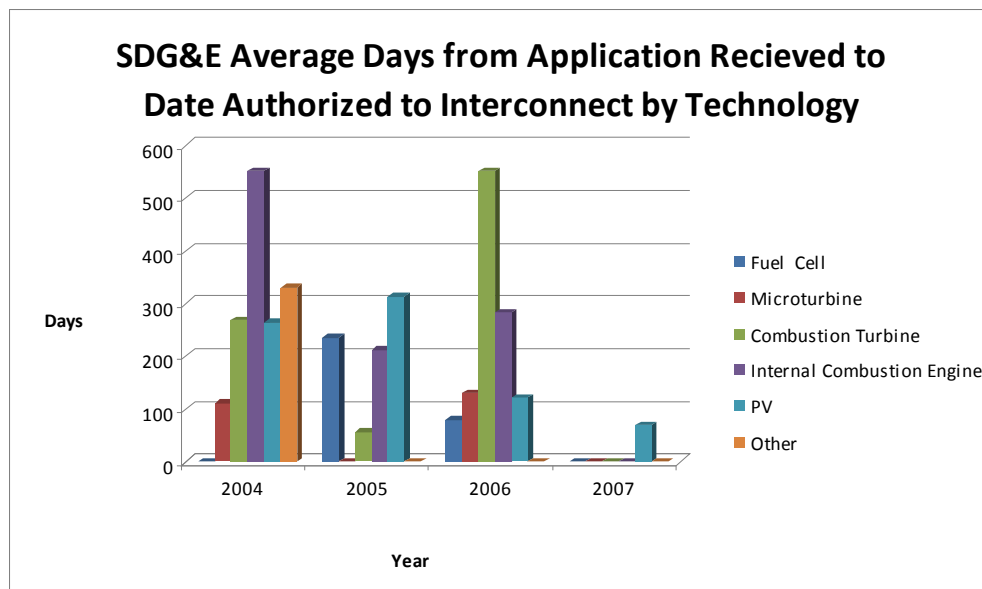
#### *San Diego Gas & Electric (SDG&E)*

For SDG&E, the average days from the application being received to “date application completed” or “date authorized to interconnect” increased marginally from 2004 to 2005, going from just below 250 days to just above 250 days. This, however, changed as the number of days to interconnect steadily decreased during 2005 to 2007, going from approximately 250 days in 2005 to approximately 50 days in 2007. This data is shown in Figure 5.



**Figure 5. SDG&E average number of days from data application received to date application completed**

Source: Provided by the author

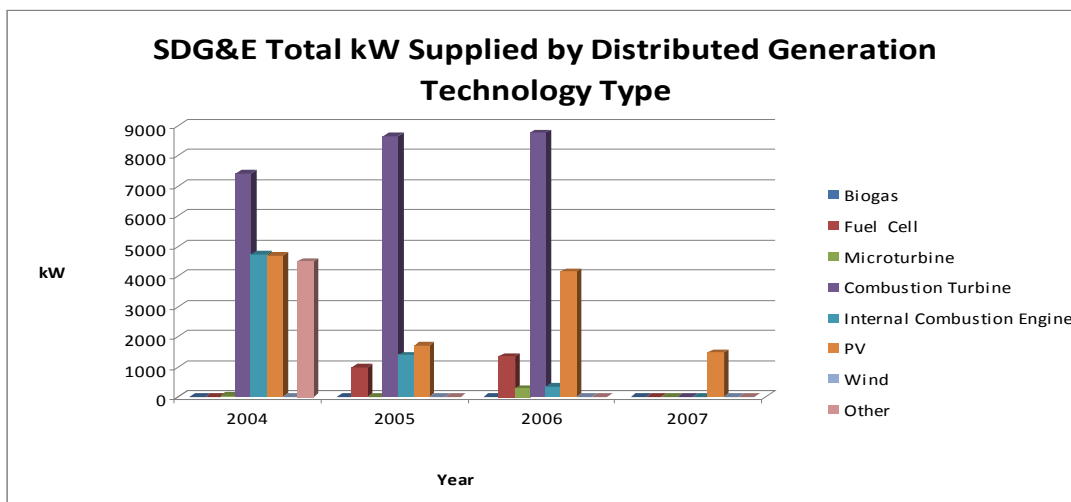


**Figure 6. SDG&E average days from application received to date authorized to interconnect by technology**

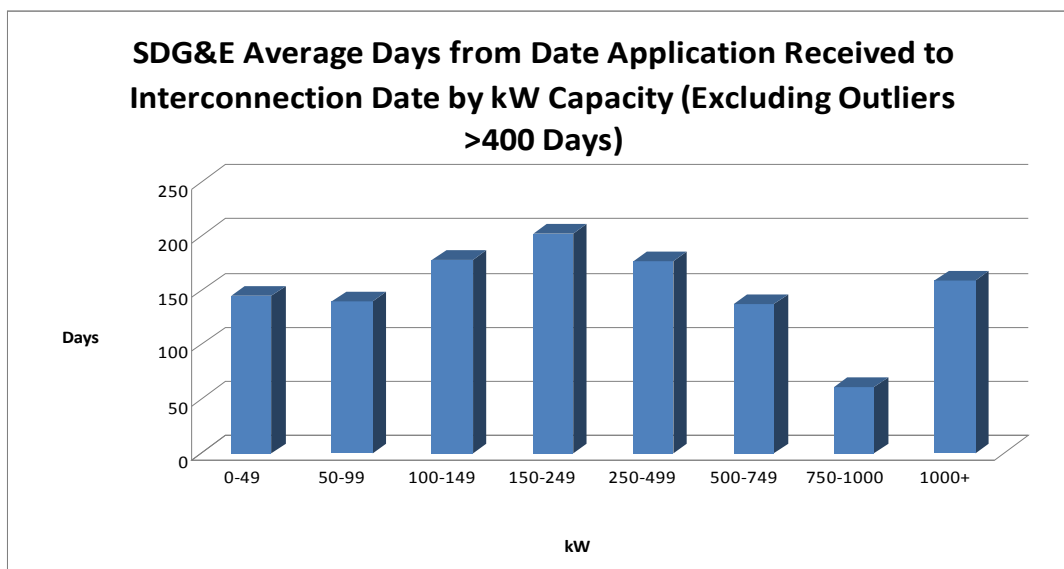
Source: Provided by the author

For SDG&E, in 2004 there were five types of technology projects being considered for approval, including: microturbine, combustion turbine, internal combustion engine, PV, and other. By 2007, PV was the only technology being reviewed for approval by SDG&E.

Figure 7 shows the interconnection times by technology type. For SDG&E, the average amount of days for approval was fairly consistent between projects with varying amounts of kW capacity. The number of days needed were between 130 and 190 for all projects (with the exception of projects between 750 to 1,000 kW, which averaged approximately 50 days for approval). To provide a more consistent data set, outliers (reviews taking longer than 400 days) were excluded. When the outliers were included, projects between 750 and 1,000 kW increased to an average of over 350 days. This is directly related to the small number of projects in this size range.



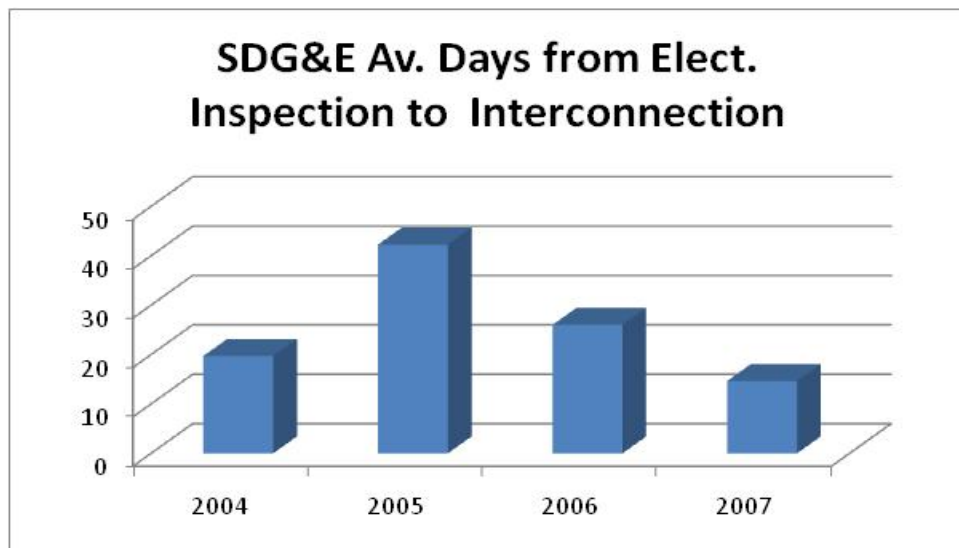
**Figure 7. SDG&E total kilowatts supplied by distributed generation technology type**  
Source: Provided by the author



**Figure 8. SDG&E average days from date application received to interconnection date by kilowatt capacity (excluding outliers less than 400 days)**  
Source: Provided by the author

Figure 8 shows SDG&E average days from application received to interconnection date by kW capacity. It shows that capacity does not appear to have a major impact on the time to interconnect for SDG&E.

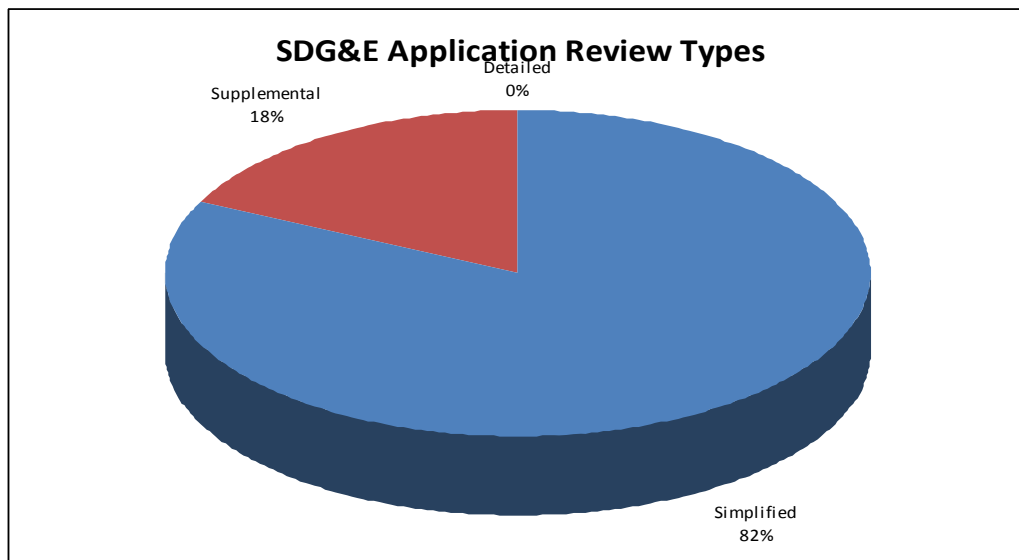
SDG&E provided additional data showing the dates of electrical inspection. It felt that the date of electrical inspection was a better gauge of how it processed applications. The average days from electrical inspection to interconnection is shown in Figure 9. It ranges from 15 days to 42 days; the best timeliness under this measure was in 2007.



**Figure 9. SDG&E average days from electrical inspection to interconnection**

Source: Provided by the author

SDG&E's reviews passed mostly under "simplified review" (82 percent). Only 18 percent required supplemental review, and none required detailed review. This data is shown as a pie chart in Figure 10.

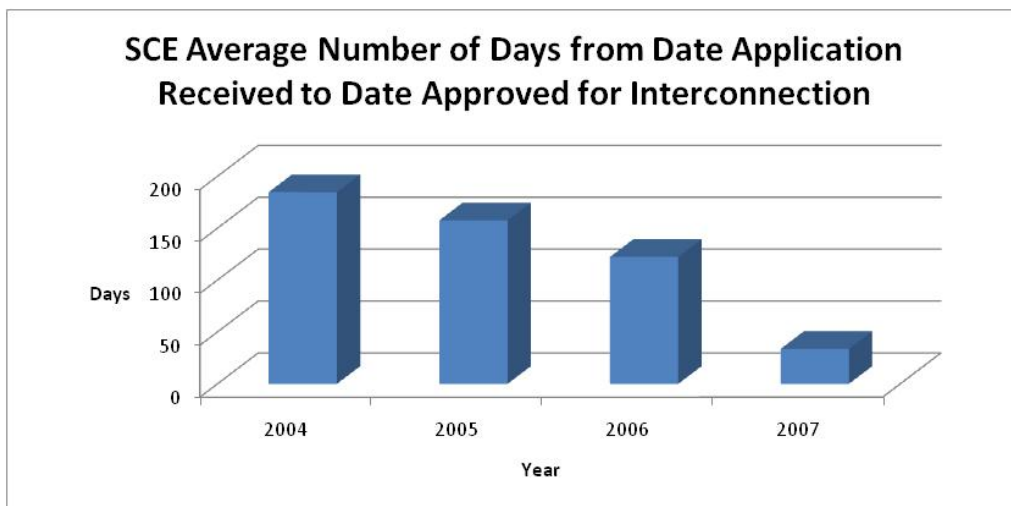


**Figure 10. SDG&E application review types**

Source: Provided by the author

### ***Southern California Edison (SCE)***

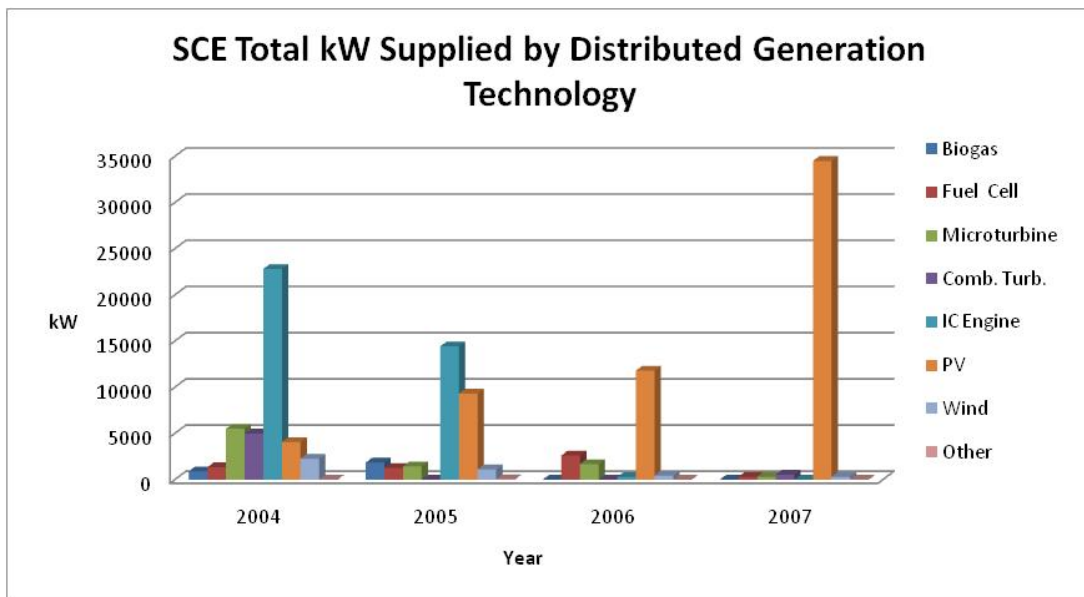
The average number of days from the date the application was received to the date approved for interconnection decreased from 175 days in 2004 to only 25 days in 2007. This is shown in Figure 11.



**Figure 11. SCE average number of days from date application received to date approved for interconnection**

Source: Provided by the author

At SCE, the technologies being deployed went from a range of systems to only three. In 2004 and 2005, there were seven types of technology contributing to the total, including biogas, fuel cell, microturbine, combustion turbine, internal combustion engine, PV, and wind. In 2006 the number of technologies decreased to three types, including fuel cell, microturbine, and PV. By 2007, the only technology contributing to the total kW was PV. This data is in Figure 12.



**Figure 12. SCE total kilowatts supplied by distributed generation technology**

Source: Provided by the author

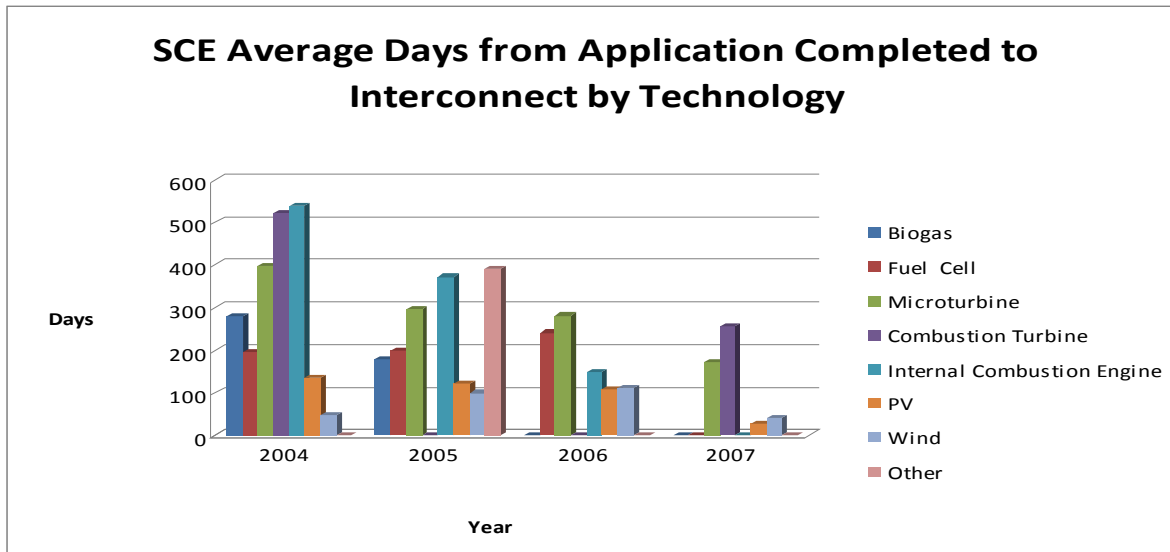
For SCE, the average number of days to interconnect based on technology is summarized in below. PV and wind were generally more expeditious than other types of systems.

**Table 1. SCE average number of days to interconnection based on technology**

Technology	2004 – 2005	2005 -2006	2006 -2007
<b>Biogas</b>	275 -175	N/A	N/A
<b>Fuel Cell</b>	190 -190	190 - 230	N/A
<b>Microturbine</b>	390 – 290	290 - 270	270 – 160
<b>Combustion Turbine</b>	510 in 2004	N/A	240 in 2007
<b>Internal Combustion Engine</b>	520 -360	360 – 140	N/A
<b>PV</b>	120 – 110	110 - 95	95 – 25
<b>Wind</b>	40 - 90	90 – 105	105 - 40

Source: Provided by the author

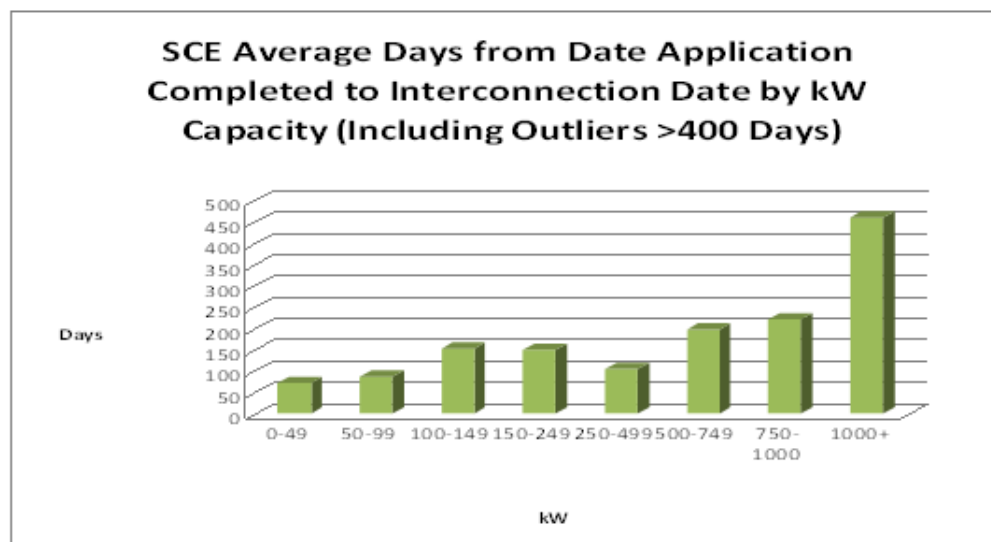
The data from above is supported by the following graph in Figure 13.



**Figure 13. SCE average days from application completed to interconnect by technology**

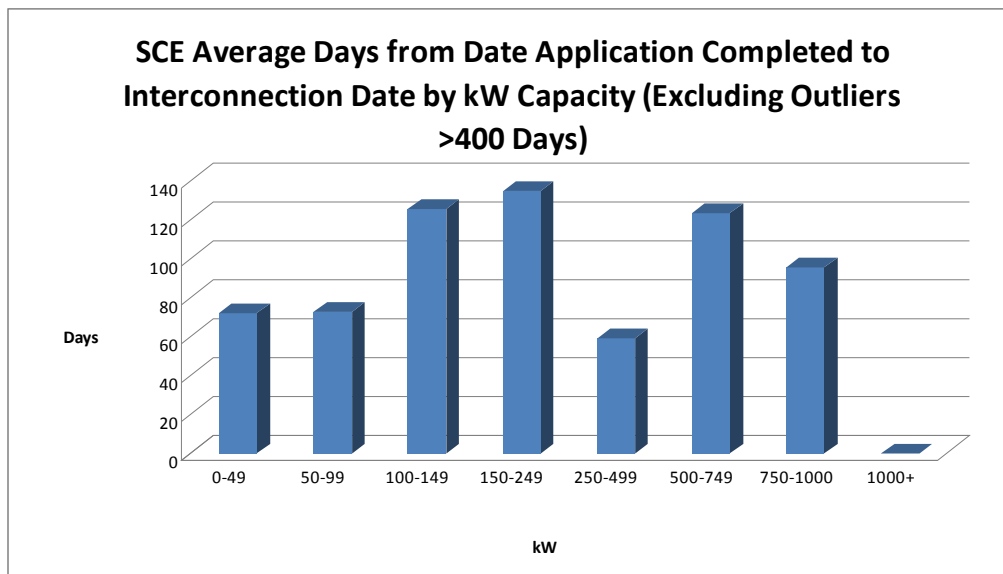
Source: Provided by the author

For SCE, the average days to interconnect in terms of kW capacity increased consistently with an increase in capacity (projects of 1,000 kW and greater took the longest to interconnect) when including outliers (reviews greater than 400 days) as shown in Figure 14. However, when outliers are excluded, there is no apparent pattern between the capacity and the number of days to interconnect, shown in Figure 15.



**Figure 14. SCE average days from date application completed to interconnection date by kilowatt capacity (including outliers less than 40 days)**

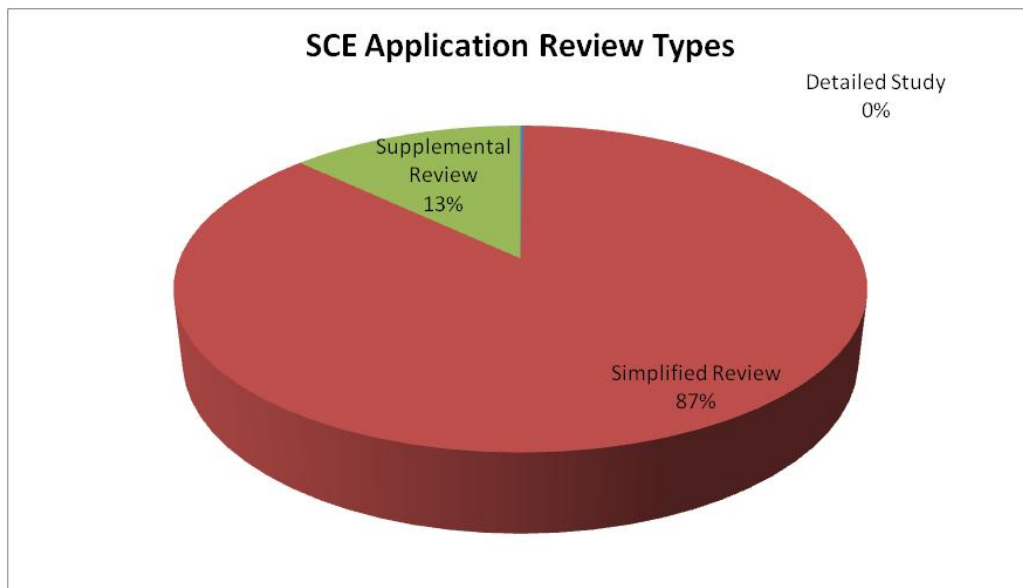
Source: Provided by the author



**Figure 15. SCE average days from date application completed to interconnection date by kilowatt capacity (excluding outliers less than 400 days)**

Source: Provided by the author

Figure 16 shows that most SCE applications were approved with simplified review (87%); 13% needed a supplemental review, and none required detailed reviews.

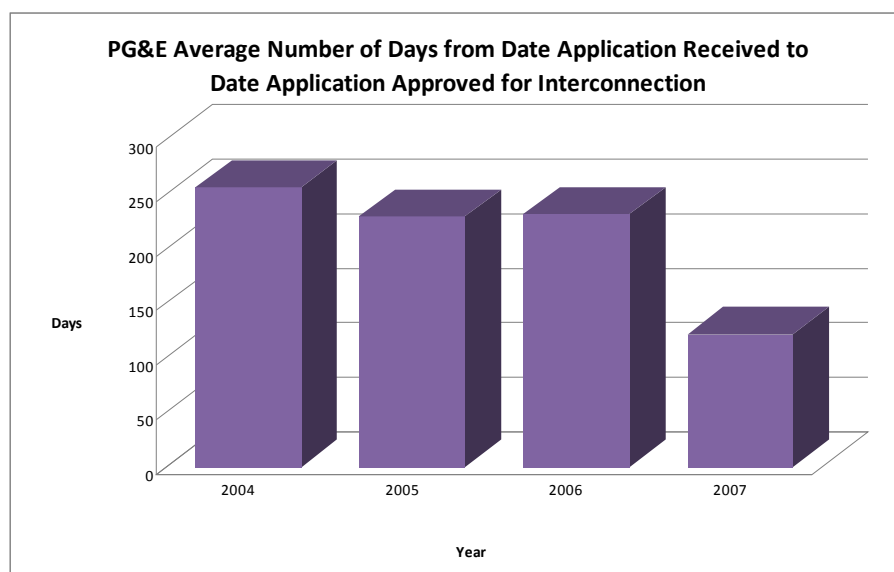


**Figure 16. SCE application review types**

Source: Provided by the author

## ***Pacific Gas and Electric***

The average number of days from the date the application was received to the date the application was approved for interconnection decreased from 250 days in 2004 to 120 days in 2007 as shown in Figure 17.



**Figure 17. PG&E average number of days from date application received to date application approved for interconnection**

Source: Provided by the author

For PG&E, the average number of days to interconnect based on technology is summarized in Table 1 below.

**Table 1. PG&E average number of days to interconnections based on technology**

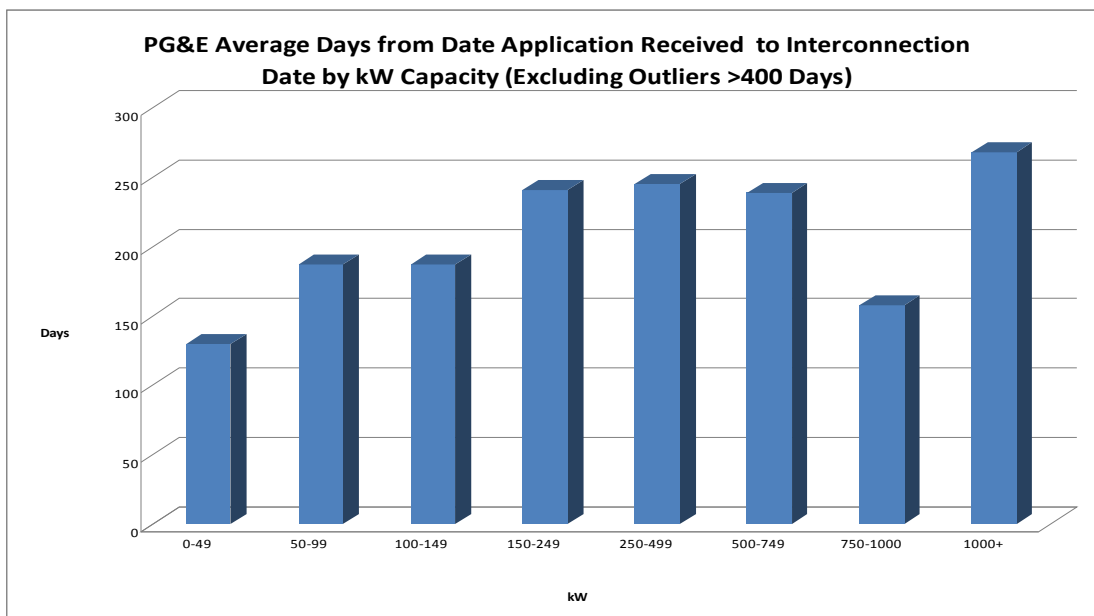
<b>Technology:</b>	<b>2004 – 2005</b>	<b>2005 -2006</b>	<b>2006 -2007</b>
<b>Fuel Cell</b>	N/A	N/A	305 - 205
<b>Microturbine</b>	325 - 300	300 - 325	325 - 210
<b>Combustion Turbine</b>	400 in 2004	N/A	140 in 2006
<b>Internal Combustion Engine</b>	345 -225	225 - 210	N/A
<b>PV</b>	225 - 210	210 - 225	225 - 110
<b>Other</b>	445 - 275	275 - 55	N/A

Source: Provided by the author

The data from Table 1 above is also shown in the graph in Figure 18. While interconnection of all technologies improved each year, there is no clear pattern between technologies.

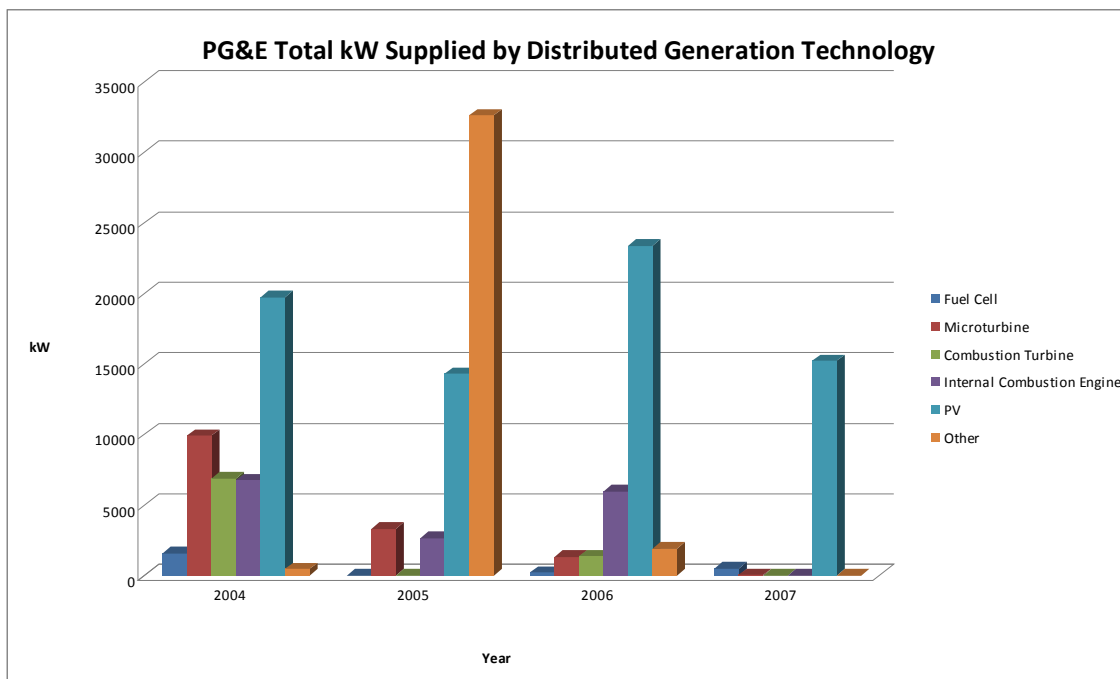
In terms of total kW supplied, Figure 19 shows that PV projects were the most significant contributor with an average of approximately 17,000 kW between 2004 and 2007. As with SCE and SDG&E, fuel cells, internal combustion engines, microturbines, and combustion turbines declined from 2004 to nearly zero by 2007.

Figure 20 and Figure 21 show the average number of days to interconnect based on kW capacity (both including and excluding outliers) remained fairly consistent as the smaller the capacity, the shorter the time to interconnect and the larger the capacity, the longer time to interconnect.



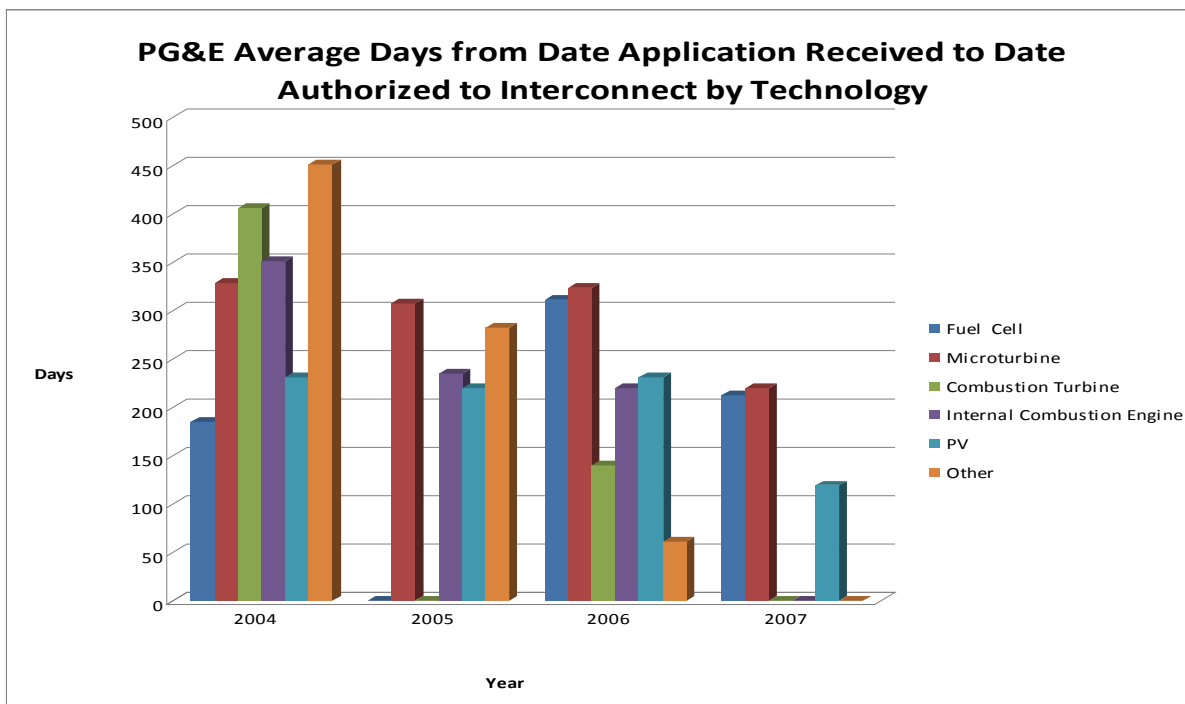
**Figure 18. PG&E average days from date application received to date authorized to interconnect by technology**

Source: Provided by the author



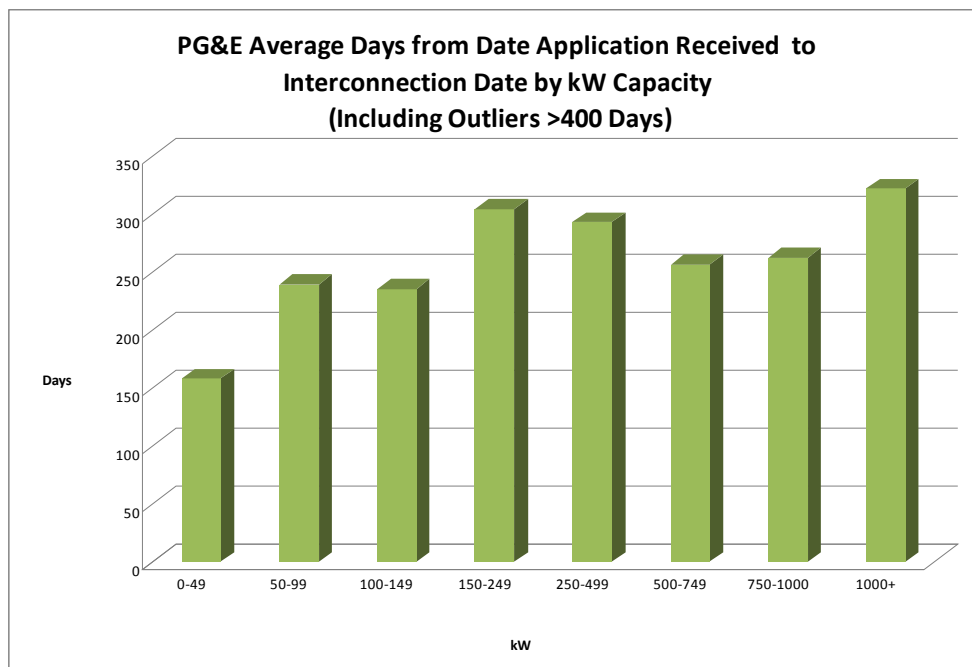
**Figure 19. PG&E total kilowatts supplied by distributed generation technology**

Source: Provided by the author



**Figure 20. PG&E average days from date application received to interconnection date by kilowatt capacity (excluding outliers less than 400 days)**

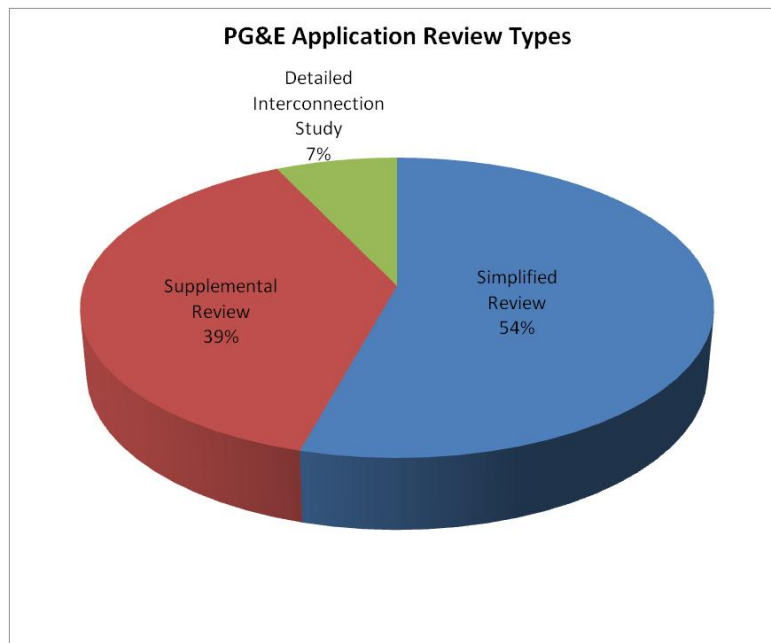
Source: Provided by the author



**Figure 21. PG&E average days from date application received to interconnection date by kilowatt capacity (including outliers less than 400 days)**

Source: Provided by the author

PG&E approved 54 percent of its applications with initial review, 39 percent required supplemental review, and 7 percent required detailed interconnection studies as shown in Figure 22.



**Figure 22. PG&E application review types**

Source: Provided by the author

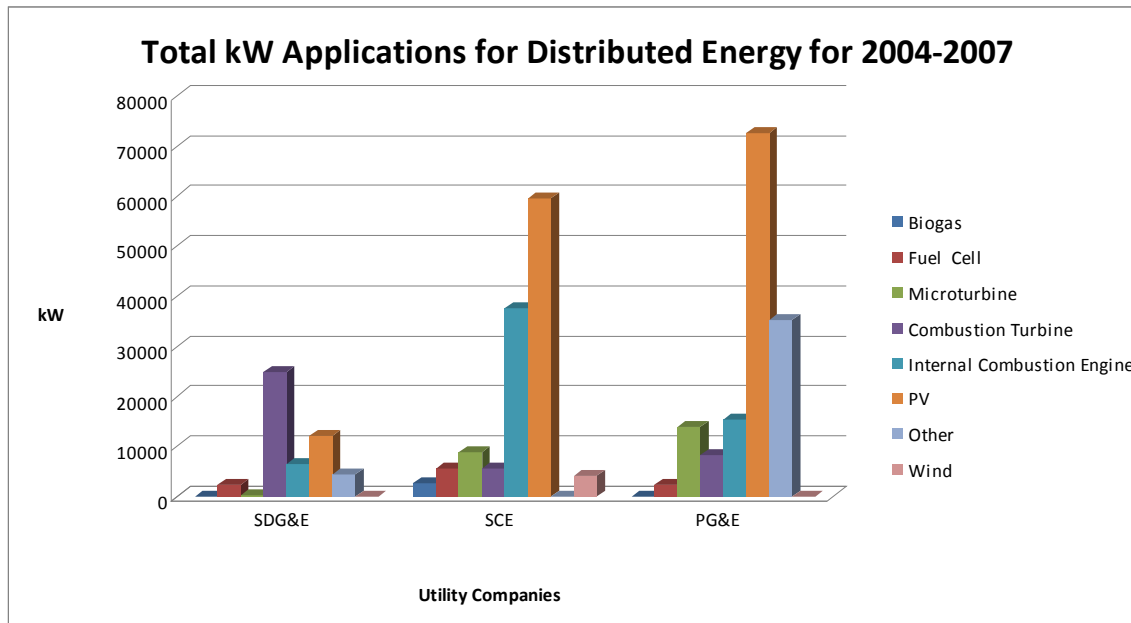
### 1.3. Comparison Between SDG&E, SCE, and PG&E for 2004-2007: kW Installed

SCE and PG&E were dominated by PV projects with approximately 60,000 kW and 70,000 kW total respectively between 2004 and 2007. For SCE, internal combustion represented its second largest contributor in terms of kW generated with approximately 36,000 kW and other technology being PG&E's second largest contributor with approximately 34,000 kW generated. SDG&E distributed generation (DG) systems were geared more towards combustion turbine projects with approximately 23,000 kW from 2004 to 2007 (their largest of any technology) followed by PV applications representing just over 10,000 kW. Between the years 2004 and 2007, SDG&E received applications with significantly less total kW when compared to SCE and PG&E. The totals are shown in Table 2 and are also represented in Figure 23.

**Table 2. Comparison of total kW from applications received from 2004 – 2007**

	Total kW	2004	2005	2006	2007
<b>SDG&amp;E</b>	50,517	21,414	12,744	14,884	1,475
<b>SCE</b>	124,074	41,869	29,449	16,807	35,948
<b>PG&amp;E</b>	148,393	45,394	52,906	34,282	15,810

Source: Provided by the author

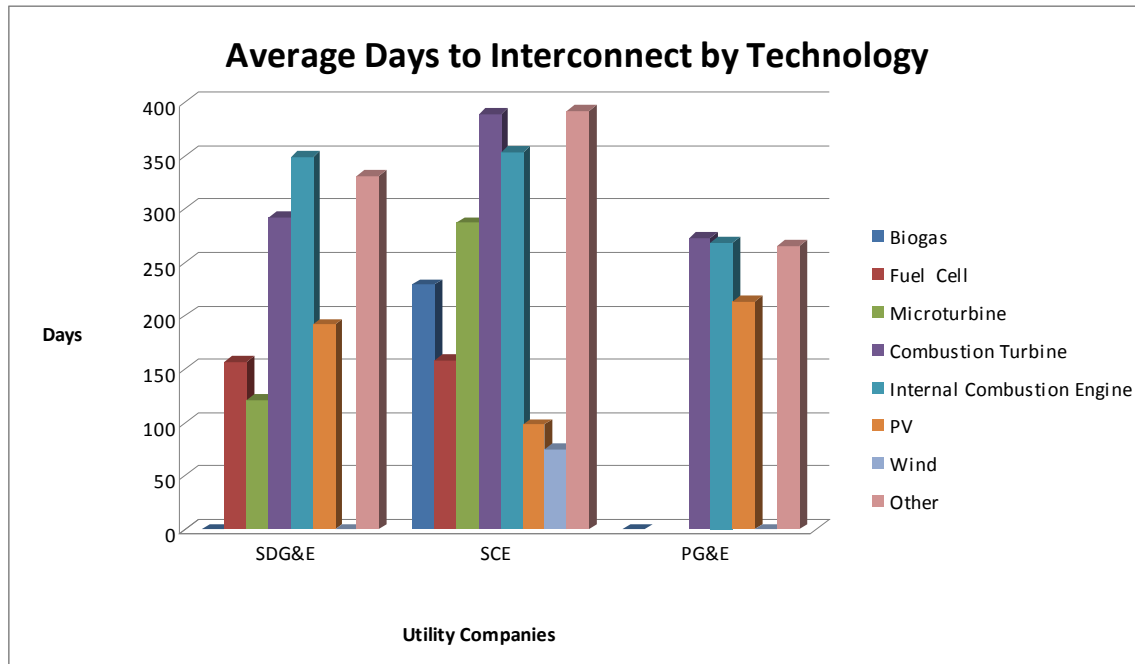


**Figure 23. Total kilowatt applications for distributed energy for 2004 – 2007**

Source: Provided by the author

#### 1.4. Average Days to Interconnect Comparison Between SDG&E, SCE, and PG&E between 2004 and 2007

There were no clear trends between utilities when comparing the time taken to interconnect, as shown in Figure 24.



**Figure 24. Average days to interconnect by technology**

Source: Provided by the author

## 1.5. Impact of Certification

Rule 21 includes a process for certification of interconnection technologies. To date, there are 13 certified interconnection systems in California as shown in Table 3.

**Table 3. Equipment certified under Rule 21**

Technology	Model			
	330	60	65	
Microturbine				
Fuel Cell	DFC300MA	DFC300A-S	DFC300MA	DFC1500MA
Plug Power	MP5000	SU1PCM-059622		
IC Engine	CM60H	CM60L	CM75H	CM75L

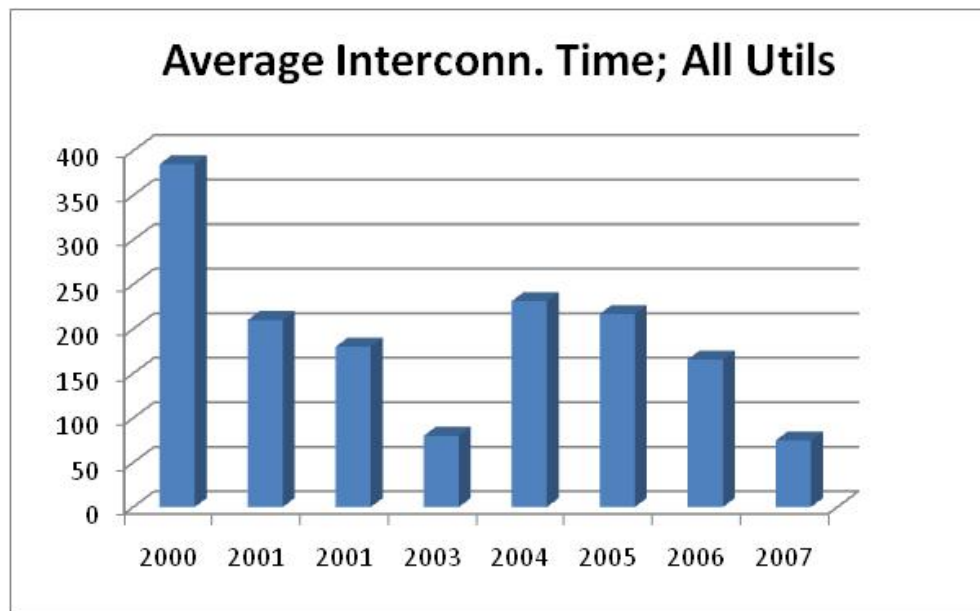
Source: Provided by the author

From the data, it was not easy to distinguish which technologies are certified; however, if microturbines and fuel cells are compared to other systems, it may be concluded that there is a small benefit to certification.



## 2.0 Conclusions and Recommendations

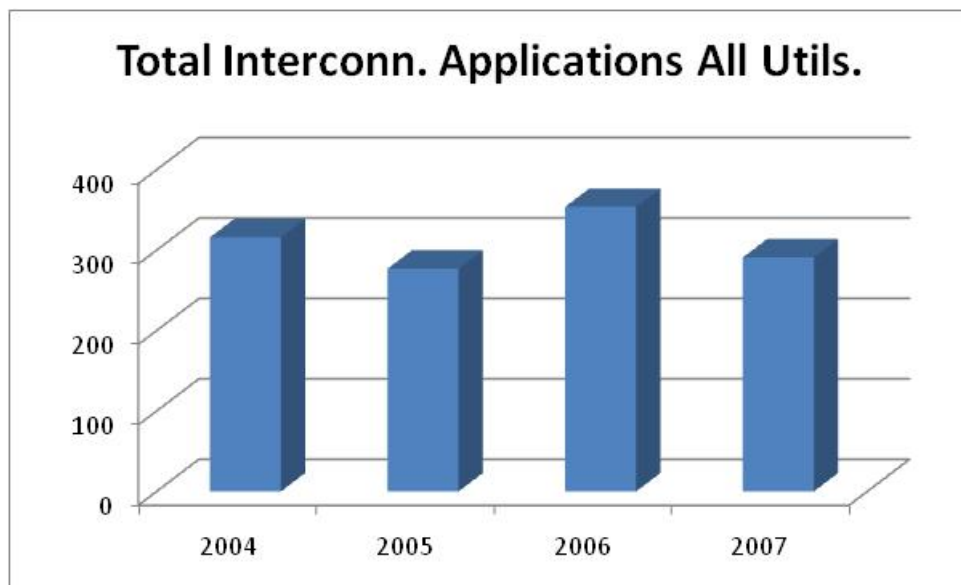
The average interconnection time for all utilities followed a similar pattern for all California IOUs. From 2000 through 2003, the average interconnection time dropped significantly, from almost 400 days to about 80 days. In 2004, the average interconnection time shot up to over 200 days, but has steadily declined since then, averaging only 75 days in 2007. While the reason for the anomaly in 2004 is not clear, the overall trend is consistently downward. This trend is shown in Figure 25.



**Figure 25. Average interconnection time, all utilities**

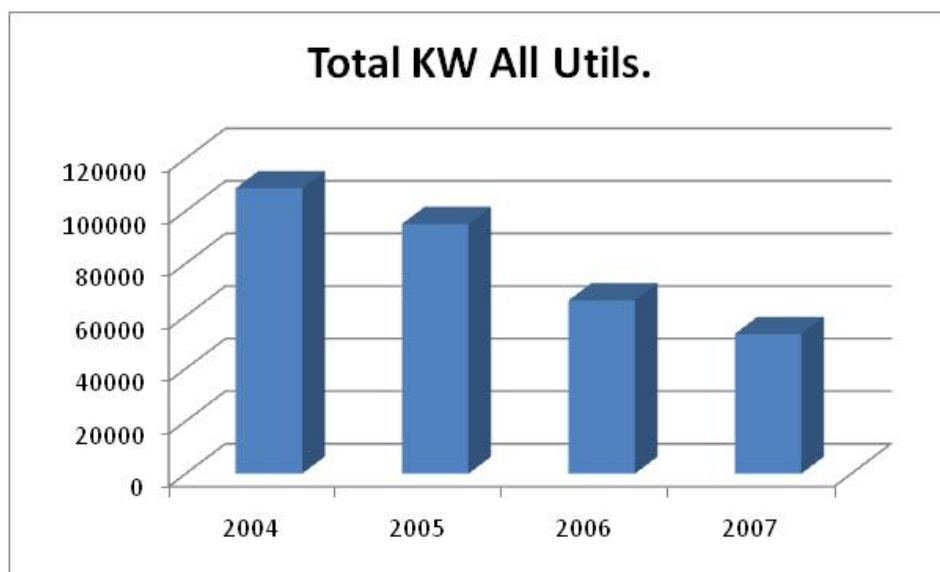
Source: Provided by the author

The number of interconnection applications through the period for all utilities combined stayed steady, around 300 a year. However, the total number of kW declined sharply each year. These trends are shown in Figure 26 and Figure 27. Some of this decline was probably offset by increases in small NEM and self-generation PV interconnections that were not included in this study.



**Figure 26. Total interconnection applications, all utilities**

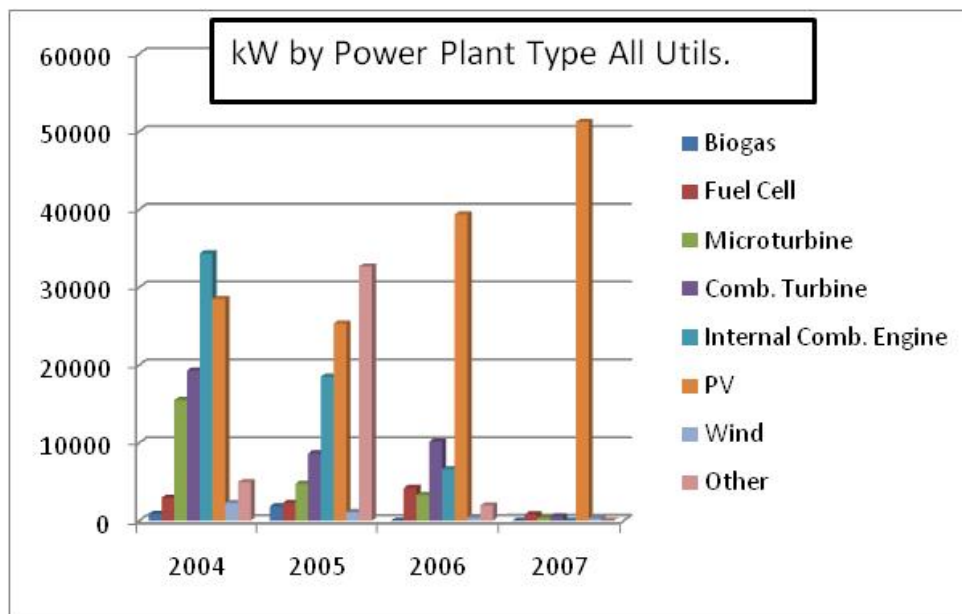
Source: Provided by the author



**Figure 27. Total kilowatts, all utilities**

Source: Provided by the author

The types of power plants being installed also underwent significant changes between 2003 and 2007 as shown in Figure 28. Internal combustion engines, microturbines, fuel cells, and wind declined sharply over the period, and by 2007, other than PV that increased sharply, virtually no other power plants were being installed in California.



**Figure 28: Kilowatts by power type, all utilities**

Source: Provided by the author

DG in California declined severely between 2004 and 2007, except for PV systems that increased dramatically in 2006 and 2007.



## Appendix A

The Excel matrix that comprises the data used in this study is available as a separate document.

### *Comments from SCE*

SCE appreciates the effort Reflective Energies has made in analyzing data on the interconnection of distributed generation (DG) projects with the utility distribution system under the Rule 21 process. However, no conclusions should be drawn from the *DG Interconnection Timeliness Study* regarding the time required specifically by the utility to accomplish its tasks in that process, which include review, engineering, contract development and in some cases construction of special facilities to support the interconnection of the DG project.

This is because the basic metric employed in the study includes time taken by activities which are beyond the control of the utility or the regulatory process. These include the customer's DG project design, equipment procurement and installation, permitting, delays in project schedule due to changing business conditions, etc. The study does, however, provide a useful overview of the time taken to complete all aspects of the process of implementing DG projects during the years surveyed.

## ***Comments from PG&E***

PG&E has been presented with a draft report titled "DG Interconnection Timeliness Study: California IOUs: 2004 to 2007" (draft) developed by Reflective Energies as a report of the California Energy Commission. The draft was developed based on data provided by PG&E and other investor-owned utilities. As now titled and edited, this draft report is inaccurate and misleading. Key errors are:

The draft is captioned a "DG Interconnection Timelines Study," but it leaves out most net metering projects without clearly explaining that it has omitted the vast majority of DG projects.

The draft claims that Net Metering projects do not interconnect under Rule 21 (Executive Summary [ES] page 1). This is simply incorrect. Rule 21 mentions net metering literally dozens of times and sets forth a detailed process for interconnecting net metered projects.

The draft claims that the number of interconnection applications between 2004 and 2007 has "stayed steady." (ES p. 1) This is true only because the report ignores most PV projects. The number of PV projects exploded over this period. Last year, PG&E interconnected over 6,000 PV projects, more than any other utility in the US, and most took less than 10 days.

The draft states that the average time to interconnect on PG&E's system was 250 days in 2004 and 120 days in 2007 (ES p. 10, Figure 13). This suggests that generators were waiting for four to eight months for PG&E, unable to generate power while waiting for the utility. In fact, frequently, during much of this time, the generator had not submitted a completed interconnection application, had not completed installation of its generation equipment, and had not obtained building permits. The report will be misleading unless this is explained up front.

Regarding the specific findings in the draft, PG&E has the following comments.

PG&E supports the objective of determining the status of DG interconnection timeliness (cycle time) for the period between 2004 thru 2007. Reflective Energies conducted conference calls in 2008 and invited PG&E, and other investor-owned utilities to participate.

Reflective Energies presented PG&E with a number of graphs and tables and asked us to respond. PG&E expressed deep concerns regarding all of the graphs in the draft interconnection report. In particular, we expressed concerns with how the data was compiled as a number of the supporting graphs we were asked to review do not appear to have been represented in the report itself.

PG&E believes erroneous conclusions may be drawn from the report based on the level of data collected and more importantly with the omissions in data that should be included in the calculation of interconnection cycle time. Major aspects of interconnection cycle time were neither considered nor mentioned, including factors associated with customer-generator contributions to cycle time (i.e. incomplete application, project design changes, construction delays, customer service oriented utility practices, etc). Without a comprehensive inclusion of all aspects that contribute to DG interconnection projects cycle time it is extremely difficult to draw definitive conclusions as to the contributors to delays in project cycle time.

If you add the utility responses as an appendix to the final report, you need to also add to the executive summary the fact of and where the utility responses can be found. The Executive Summary should also mention of the primary concerns of the California investor owned utilities (IOU) as previously expressed during a number of conference calls on the subject and in these comments.

Within the executive summary the table entitled “Average Interconn. Time: All Utils” (ES p. 1) the results for 2004 are described as an anomaly. PG&E would challenge the assertion of 2004 as being an anomaly and would suggest the results may be due to discrepancies between the data collected for this study (i.e. 2004 to 2007) and the previous study (i.e. 2000 to 2003).

PG&E takes issue with all tables and graphs that are based on the data element of “Date Application Received.” The initial application receipt date is extremely misleading in determining interconnection cycle time for a number of reasons. For example, in a majority of cases the application package from the customer-developer-integrator is incomplete (i.e., missing drawings, fees, etc.). The utility practice is to accept an incomplete application, acknowledge receipt back to the customer and communicate which elements are needed so our initial engineering review can begin. For expediency, consistency, and to optimize utility resources, PG&E requires a minimum amount of information before the technical aspects of the process begins. Allowing the customer-developer to submit incomplete applications is a utility practice that benefits our customers. Once received, our project manager, acting as the utility single point of contact, works with the applicant to further define the project milestones. As a suggestion, PG&E offers that a more accurate measure of cycle time is the number of days from the date the application package is deemed complete per Rule 21 to the date the generator is authorized for parallel operation. Although previously recommended, this was not incorporated into the study.

In the case of PG&E, the report omits PG&E’s Average Days from Date Application Completed (i.e. Deemed Complete) to Authorized Interconnection Date. Although the data was provided by PG&E and recommended for inclusion in the report, it was omitted.

There is insufficient attention in the report given to outliers that would certainly skew the conclusions that may be drawn. PG&E’s review of the outliers suggests they are primarily customer oriented and increase average interconnection cycle time from 50 to 100 days. As such, the data associated with those projects could be depicted differently or omitted as irrelevant.

PG&E supports the overall calculation of interconnection cycle times but suggests that any measure include all activities, both utility- and customer-developer oriented.

To reiterate, PG&E supports the objective to identify the interconnection cycle time for the period 2004-2007. PG&E recommends revising the report as described above, and continuing to work through the issues with stakeholders, as well as through the Rule 21 Working Group expected to be reinstated by the CPUC. We look forward to a more valuable report for regulatory policy makers.

Best Personal Regards,

Fred Skillman, Jr.

Supervising Project Manager

Generation Interconnection Services

Pacific Gas and Electric Company

(415) 973-2287

### **Appendix 3: Comments from SDG&E**



San Diego Gas & Electric (SDG&E) appreciates having this opportunity to respond to the report of the California Energy Commission on interconnection and it recognizes the effort and professionalism that is reflected in it. We have no issues with the actual data and the results of this report. However, this report does not reflect the entire picture.

The report does not report which aspects of the interconnection timeline process are under the utilities' control, and which remain under the customers', local government jurisdictions' control, or that of others. The window of time that is in the jurisdiction of the utility begins when the local jurisdiction gives the utility a electrical release and ends upon the date the project is authorized in parallel to our electrical grid. Many things change within the scope of work, such as availability of equipment, project design changes, construction time delays, and many other assorted milestones that are associated with installing this type of project. SDG&E often communicates with its customers and asked them to submit their interconnection application as early as possible to give all parties adequate time to meet their deadlines, which can in some instances results in a longer timeframe overall but which benefit the customer in the process. In fact, this CEC report does not use a consistent definition of interconnection timeliness that is often used within the regulatory environment for interconnections. For instance, in data requests SDG&E receives routinely from the California Public Utility Commission (CPUC), it is stated that "The time for interconnections is based upon the date the utility interconnection department deems the application complete (final single line, final building permit, etc.) to performing the interconnection inspection and issuing the permission to operate letter. This time is under the utility's control, and not dependent on additional inputs from cities, counties, etc." SDG&E feels that it is extremely important to be consistent in requesting data and reporting data within the state. SDG&E asks that the CEC and its contractors use this same definition so that there is even greater clarity for these discussions.